

Effect of Small Additions of 'Modifiers'
on the Mechanical Properties of Alloy
Cast Steel, by M/ P. Braun.

RUSSIAN, per, Iz Ak Nauk SSSR,
Otdel Tekh Nauk, Met i Topliov,
No 4, 1959,

HB 4829

Sci - Min/Met
Feb 62

182.769

Reduction of Iron Ores With Mixtures of Petroleum
Gas and Water Vapor, by M. Z. Enikeyeva, et al, 10 pp.

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Metal i Toplivo, No 4, 1959, pp 32-41.

HB 4826
ATS RJ-2721 in 63M42R

Sci - Min/Met

Sep 60

RUSSIAN to FRENCH
OTS TT-62-28218

127,049

Reaction Properties of Carbonaceous Materials,
Ore-Coal and Coal-Lime Pellets, by B. A.
Orusaitis, A. I. Petrovich.

RUSSIAN, per, Iz Ak Nauk SSSR, Otel Tekh Nauk,
Met i Topl, 1959, No 4, pp ~~XXX~~ 42-45.

HB 4827

Sci - Min/Met
Oct 61

15 372

Fr-1 * UK-23

MIKHEEV V. S.

Heat-resistance of Fe-Cr-Al alloy No. 2 at 600 to 1200°C

Propriétés refractaires de l'alliage fer-chrome aluminium
n° 2 aux températures de 600 à 1200°C* Izv. Akad. Nauk SSSR, Otdel Tekhn. Nauk: Met. i Topl., No. 4,
66-72 (1959)

Fr-1: R. 1235 - French

* UK-23: English

Abs.: NSA, 14, No. 6A, ref. 5598 (1960) - English

Investigations of High Temperature Creep of Nickel
Solid Solutions by Method of Hot Hardness, by K. A.
Osipov, (UNCL).

RUSSIAN, per, Iz Ak Nauk SSSR Otdel Tekh Nauk, Metal
i Topliva, No 4, 1959, pp 73-81. 9662621

*ATIC MCL-625/V.

Sci - Min/Metals

Apr 60

Ref: T60-12954

On the Accuracy of Parametric Dependences of
Long Lasting Strength, by V. N. Geminov,
I. A. Odling.

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Nauk Metal i Toplivo, No 4, 1959, pp 73-76.
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Sci - Min/Metals

Jul 61

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Effect of Strain Cycling on the Structure of
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et al, 8 pp. *M. Ya. Ye. P.*

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,
Metall i Toplivo, No 4, 1959, pp 82-87. 9691493

ACSI I-3866
ID 2253807
525th MI Gp

Sci / M/M
Feb 61

248,429

(NY-5000)

Properties and Treatment of Alnico Type Alloys,
by Ye. M. Dovgalevskiy, Ye. I. Sokolovskiy, 14 pp.

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Met i Toplivo, No 4, Jul/Aug 1959, pp 99-105.

JPRS 5806

Sci - Min/Metals

Oct 60

129,608

Manufacture and Properties of Cermet Feffo-
Nickel-Aluminum Magnets, by P. A. Gladyshev,
V. I. Menelov.

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Sci - Min/Metals

Jul 61

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11 pp.

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CIA/PDD XX-1030
NOT RELEASABLE TO FOREIGN NATIONALS

Sci - Electron

Jul 61

USIB INTERNAL USE ONLY

ATS/RT-330
161,016

Thin Iron Powder Base Permanent Magnets,
by A. S. Eysurovich.

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Mater. i Toplivo, No 4, 1959, pp 130-134
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Sci - Min/Metals

Jul 61

157, 529

Powder Metallurgy as a Method of Manufacturing
and Searching for Magnetic Solid Materials,
by A. B. Al'tman.

RUSSIAN, per, Iz Akad Nauk, SSSR Otdel.
Tekh Nauk Metal i Toplivo, No 4, 1959, pp 135-142.
9662621.

ATTC MCL-625/1

Sci - Min/Metals

Jul 61

159, 522

Some Relationships in the Hot Pressing of Powders
of Refractory Compounds, by M. S. Koval'chenko,
G. V. Samschov.

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9662021

HB 4799

*ATIC MCL-625/V

Sci - Min/Met

May 60

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On the Joint Solubility of Elements of the III
and V Groups in Germanium, by V. N. Glazov,
D. A. Petrov, S. N. Chizhevskaya, 4 pp.

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MDF G-179
9092760

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Sci
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On the Nature of the Quasi-binary Section in the
Germanium-Indium-Antimony System, by B. G. Zhurkin,
V. S. Zamilov, D. A. Petrov, A. D. Suchkova.

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WDF Z-123

Sci

Nov 60

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(DC-3449)

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the Development of New High Strength Titanium
Alloys, by I. I. Kornilov, 20 pp.

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Metal. Toplivo, No 4, 1959, pp 190-199.

JPRS 3423

Sci - Minerals/Metals

Jun 60

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Concerning Plasticity of Titanium Silicides;
by V. S. Neshpor, G. V. Samsonov.

RUSSIAN, per, Iz Akad Nauk, SSSR Otdel
Tekh Nauk Metal i Toplivo, No 4, 1959,
pp 202-204. 9662621

AFIC MCL-625/1

Sci. - Min/Metals

Jul 61

157, 523

Characterization of Oxygen-Containing
Functional Groups in Vitreous From a
Metachronic Series of Don Basin Coals,
by O. Gavrilova.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel
Tek Nauk Metall, i Toplivo, No 4,
1959, pp 223-234.

EN

CSIRO 5124

175, 691

Sci - Chem
Dec 61

Effect of FeO Content on Magnetic Characteristics
of Sinters Fluxed in Various Degrees, by N. A.
Gladkov, et al. UNCL

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MB 4819

Sci - Misc/Met
Jan 60

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Reticular Substructure of Ferrite Grains and
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1959, pp 9-62
GB/41/3622 - Price \$ 7.75

Sci -
Jul. 67

335,043

Solubility of Indium and Antimony in Germanium and Their Influence on Certain Electrical Properties of Germanium, by B. G. Zhurkin, V. S. Zenskov, D. A. Petrov, 6 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk, Metal. i Toplivo, No 5, 1959, pp 86-90.

MDF Z-126

9093248

173 234

CEA-tr-R-1442 Uncl.

PREPARATION D'EMETTEURS ALPHA PLANS EN POLONIUM
DE ACTIVITE. (Preparation of Flat Polonium Alpha Emitters of High Activity). I. N. Plaksin (Plaksine), V. N. Smirnov (Smirnoff), and L. P. Starchik. Translated into French from Izvest. Akad. Nauk S.S.S.R., Otdel. Tekh. Nauk, Met. i Toplivo. No 5, 1959, pp 122-37.

R-352-N

On the Viscosity of Liquid Metals, by A. M.
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RUSSIAN, per, Iz Akad Nauk SSSR, Otdel tekhn Nauk,
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AEC Tr-4202

Sci - Min/Met
19 Oct 60

129,842

Effect of Steel Composition and Deoxidation
Practice on Hydrogen-Induced Delayed Fracture,
O. N. Mal'nevskiy.

RUSSIAN, per. In Ak Nauk SSSR, Otdel Tekh Nauk,
Metal. Fizika, No 7, Sep/Oct 1959, pp 126, 127.

RB 4704

Sci - Min/Met

Apr 61

114,266

Nature of Carbide Phase in Titanium-Alloyed Steels,
by Yu. P. Lukashovich-Duvanova, V. A. Urazova.

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Metal. i Toplivo, No 5, Sep/Oct 1959, pp 127-130.

EB 4785

Sci. - Min/Mec

May 60

116,532

Phase Transformations in the Iron-Vanadium
System, by M. I. Zakharovs, L. A. Semenova,
et al, 5 pp.

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Nauk, Metal i Toplivo, No 5, Sep, Oct, 1959,
135-138.

JPRS 26338

Sci - M & M
Sep 64

266,207

Structure and Properties of Niobium-Tin Alloys,
by M. I. Agafonova, V. V. Baron, E. M. Savitskiy, 7 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,
Metal i Toplivo, No 5, 1959, pp 138-141. 9092532

AEC Tr-5323-9066998
MDF A-158

Sci
Oct 61

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An Investigation Into the Thermocatalytic
Principle of Methane Detection in a Mine
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chenko.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel
Khim. i Top. 13, No 5, 1959, pp 174-
178.

OTS 77-64-11171

ALL H. 3216

174-174. CIR/FOO X-5333

Sci - Envs
Mar 62

183, 703

New Ways of Intensifying Metallurgical Processes,
by I. P. Bardin.

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Metal i Toplivo, No 6, 1959, pp 3-7.

ETSI 2083

Sci - Min/Met

Jun 61

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The Structure and Phase Composition of Diffusion
Coating of Molybdenum by Silicon, by P.M. Arzhavyy,
et al.

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i Toplivo, No 6, 1959, pp 127-129. CIA 9660420

ATIC MEL 676

Sci - Min/Met

May 61

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On the Nature of Slip Lines on Steel, by N. S.
Alferova, et al.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,
Metal i Toplivo, No 6, 1959, pp 131, 132.

HB 5103

Sci - Min/tet

Apr 61

147,465

(NY-3556).

Semiconductor Thermocouples for High Temperature
Use, by P. S. Kislyy, G. V. Samsonov, 12 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,
Metal i Toplivo, No 6, Nov-Dec 1959, pp 133-137.

JPRS 2526

~~SECRET~~

Sci - Encl/Sec

May 60

116, 264

Rovinskii, B. M. and Sinayaki, V. M.
 ON THE NATURE OF THE BAUSCHINGER EFFECT.
 22 Sep 61 (9 p. (illus. omitted) 11 refs. NBS:
 S-30210-61 JPRS: R-1143-D.
 Order from LC or SLA mi\$1.80, ph\$1.80 61-13844

Trans. of Akad[emiya] Nauk SSSR. Otdeleniye
 Tekhnicheskikh Nauk. Izvestiya: Metallurgiya i
 Toplivo, 1959, no. 6, p. 137-141.

It is shown that the Bauschinger effect depends on the
 emergence during uniaxial plastic deformation of
 residual oriented microstrains. The reduction of the
 conventional yield point during reloading of the re-
 verse print is correlated satisfactorily with the mag-
 nitude of residual oriented microstrains arising after
 preliminary deformation, most favorably in the region
 of 0.5 to 1.5%, and the magnitude of residual oriented
 microstrains can be summed up with macroscopic
 strains created by the external load. From the size of
 (Metallurgy-Structural, TT, v. 5, no. 4) (over)

61-13844

1. Single crystals
 (Metallurgy)--Deformation
2. Title: Bauschinger effect
- I. Rovinskii, B. M.
- II. Sinayaki, V. M.
- III. NBS-S-30210-61
- IV. JPRS-R-1143-D
- V. Joint Publications Research
 Service, Washington, D. C.

143,160

Office of Technical Services

1960

IZVESTIYA AN SSSR, OTN, METALLURGIYA
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From 1963 see: "IZVESTIYA AN SSSR,
METALLURGIYA I GORNOE DELO"

Vigdorovich, V. N., Ivleva, V. S., and Krol', L. Ya.
ON THE PURIFICATION OF ANTIMONY BY THE
METHOD OF ZONE REFINING. [1960] 8p. 13 refs.
Order from MDF \$4.50 MDF V-150

Trans. of A[kademiya] N[auk] SSSR. O[tdele]niye
T[ekhnicheskikh] N[auk]. Izvestiya: M[etallurgiya] i
T[oplivo] 1960, no. 1, p. 44-49.

143,091

(Engineering--Chemical, TT, v. 5, no. 1)

61-12072

1. Antimony--Purification
2. Title: Zone refining
- I. Vigdorovich, V. N.
- II. Ivleva, V. S.
- III. Krol', L. Ya.
- IV. MDF V-150
- V. Friedman, Morris D.,
Inc., West Newton, Mass.

Office of Technical Services

Use of Spiral Flow Conditions to Increase Convective
Heat Transfer, by V. K. Ermolin,

add Tech. Note
RUSSIAN, per, Iz Ak Nauk SSSR, ~~OTN~~, No 1, 1960,
pp 55-61.

*AEC

Sci - Eng
Oct 60

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Baron, V. V., Efimov, Yu. V., and Savitskii, E. M.
STRUCTURE AND PROPERTIES OF ALLOYS IN
THE VANADIUM-TUNGSTEN SYSTEM. Jan 62 [3]p.
2 refs.

Available in ARS Journal, v. 32, no. 1, \$3.00

Trans. of Akademiya Nauk SSSR. Otdel[enie] Tekh-
[nicheskikh] Nauk. Izvestiya: Metallurgiya i Toplivo,
1960, no. 1, p. 70-74.

DESCRIPTORS: *Vanadium alloys, *Tungsten alloys,
Alloys, Plasticity, Microstructure, Hardness,
Mechanical properties, Oxidation, Temperature.

(Metallurgy, TT, v. 7, no. 10)

62-12691

- I. Baron, V. V.
- II. Efimov, Yu. V.
- III. Savitskii, E. M.
- IV. Primary Sources,
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- V. American Rocket Society,
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Office of Technical Services

De Dyk Man and Nesmeyanov, An. N.
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[1960] 12p. 21 refs.
Order from MDF \$6.50

MDF D-143

Trans. of Akademiya Nauk SSSR. Otdeleniye
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Topolivo 1960, no. 1, p. 75-84.

142,968

(Metallurgy--Nonferrous Metals, TT, v. 5, no. 3)

61-12174

1. Cobalt-nickel alloys--
Thermodynamic properties

I. De Dyk Man

II. Nesmeyanov, An. N.

III. MDF D-143

IV. Friedman, Morris D.,
Inc., West Newton, Mass.

Office of Technical Services

Melting Diagram for the Titanium-Vanadium-
Molybdenum Ternary System, by
I. I. Kornikov, R. S. Poliakova, 4 pp.

RUSSIAN, per, Investia Akademii Nauk
SSSR, Otdel. Tekh. Nauk, Metallurgiya
1 Toplivo, 1960, No 1, pp 85-89.

ARS Journal
Vol XXXI, No 5
May 1961

Sci - Engr

192, 321

Ivanova, V. S.
STRUCTURAL-ENERGETIC INTERPRETATION OF
FATIGUE PHENOMENA IN METALS (Strukturno-
Energeticheskaya Interpretatsiya Yavleniya Ustalosti
Metallöv). [1962] [28]p. (foreign text included)
17 refs.

Order from OTS or SLA \$2.60 62-14554

Trans. of Akademiya Nauk SSSR... [Otdelenie]
T[ekhnicheskikh] Nauk... Izvestiya Metallurgiya i
Toplivo, 1960, no. 1, p. 93-100.

DESCRIPTORS: Energy, Microstructure, *Metals,
*Fatigue (Mechanics), Lattices, Fracture (Mechanics),
Crystal structure, Elasticity.

The energy of elastic deformation of the crystal lat-
tice up to the critical point, per unit volume at the
maximum point of deformation of the crystal lattice,
as well as the energy per unit volume required for
(Metallurgy - Structural, IT, v. 8, no. 11) (over)

62-14554

I. Ivanova, V. S.

Office of Technical Services

Failure of Metals Due to Thermal Fatigue,
by Yu. V. Kostochkin, I. A. Odintsov, 3 pp.

RUSSIAN, per, Izvestia Akademii Nauk
SSSR, Otd. Tekh. Nauk, Metallurgia i
Toplivo, No 1, 1960, pp 101-104.

ARS Journal
Vol XXX, No 11
Nov 1960

192, 310

Sci - Tech / mat
62

Study of the Mechanism of the Hydrogen Brittleness
of Titanium and Its Alloys, by L. S. Moroz,
Yu. D. Khesin, 22 pp.

RUSSIAN, per, Iz Ak Nauk, Otdel Tekh Nauk,
Metal. i Toplivo, No 1, 1960, pp 111-122.

9079372

#AE

AEC UCRL-Trans-661(L)

Sci
Aug 61

163,773

Priselkov, Yu. A., Sapozhnikov, Yu. A., and
Tseplyaeva, A. V.
MEASURING THE PRESSURE OF SATURATED BO-
RON VAPOR. [1961] [5]p. 9 refs.
Order from OTS or SLA \$1.10 61-28232

Trans. of Akademiya Nauk SSSR. Otdelenie
Tekhnicheskikh Nauk. Izvestiya: Metallurgiya i
Toplivo, 1960, no. 1, p. 134-137.

DESCRIPTORS: *Vapor pressure, Measurement,
*Boron, Heat of sublimation, Thermochemistry,
Thermodynamics.

The study deals with the determination of vapor pres-
sure within the temperature range of 1651-1764°K by
Knudsen's effusion method. The boron vapor pressure
depends largely on the S/K ratio. Saturation is
reached in the chamber only when the S/K₀ ratio is
larger than 15,000-20,000.

61-28232

- I. Priselkov, Yu. A.
- II. Sapozhnikov, Yu. A.
- III. Tseplyaeva, A. V.
- IV. Translations, New York

(Physics--Thermodynamics.
TT, v. 7, no. 7)

Office of Technical Services

Secondary Breaking of Iron Ores by High-
Frequency Current, by M. I. Agoshkin, A. S.
Voronyuk.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,
Metal i Toplivo, No 1, 1960, pp 138-144.

HB 4857

Sel - Electron

Jan 61.

155,173

Elastic Interaction of Rock Body and Casting,
by Yu. A. Pozlyak, 9 pp.

RUSSIAN, per, In Ak Nauk SSSR, Otdel
Tehn Nauk, ~~Metall i Togiivo~~, No 1,
1960, pp 145-151.

ATU-47M43R

ATS-RJ-3495

Sci
Vol IV, No 11
Jun 62

199, 259

Automated Determination of Mechanical Properties
of Coke, by G. N. Daitryev, G. I. Enik.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,
Metal i Toplivo, No 1, 1960, pp 174, 175.

HB 4813

Scl - Mech

AUG 60

123,081

Carbon and Hydrogen Elimination from 2,3-Dihydro-
1,4-benzodioxin Derivatives, by A. N.
Golov, V. P. Zaitseva,

KHIMIA, Leningrad, 1960, No 2, pp 21-25.
Metal. i Toplivo, No 2, 1960, pp 21-25.

EE 4850

Sol. - 1960/60
36 Nov 60

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Influence of Oxygen on the Surface Tension of Nickel
and the Boundary Angle of Wetting of Aluminum Oxide
by Nickel, by V. N. Yeremenko, Yu. V. Naydich, 5 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Metal i Toplivo, No 2,
1960, pp 53-55.

MDF E-111
9092703

Sci

Oct 61

Movchan, B. A.
CONCENTRATION LAYERS ON INTERPHASIAL
SURFACES DURING CRYSTALLIZATION OF
ALLOYS. [1960] 9p. 8 refs.
Order from MDF \$5.50

MDF M-140

Trans. of A[kademiya] N[auk] SSSR. O[tdeleniye]
T[ekhnicheskikh] N[auk]. Izvestiya: Met[allurgiya] i
Topolivo[ye] 1960, no. 2, p. 72-78.

143,301

(Metallurgy--Structural, TT, v. 5, no. 4)

61-12259

1. Alloys--Crystallization
2. Alloys--Phase studies
3. Alloys--Surfaces

- I. Movchan, B. A.
- II. MDF M-140
- III. Friedman, Morris D.,
Inc., West Newton, Mass.

Office of Technical Services

63-13718

Gel'd, P. V., and Kusenko, F. G.
THE HEAT CONTENT AND HEAT CAPACITY OF
NIOBIUM OXIDES AND CARBIDES AT HIGH TEMPER-
ATURES. [1962] [12]p. 24 refs.
Order from OTS or SLA \$1.60

63-13718

Trans. of Akademiya Nauk SSSR, Otdel'eniye
Tekhnicheskikh Nauk, Izvestiya Metallurgiya i
Toplivo, 1960, no. 2, p. 79-86.

DESCRIPTORS: *Thermochemistry, *Niobium
compounds, *Oxides, *Carbides, Temperature, Heat,
*Entropy.

- I. Gel'd, P. V.
- II. Kusenko, F. G.
- III. Translations, New York

(Physics--Thermodynamics, TT, v. 9, no. 12)

Office of Technical Services

Effect of Low Temperatures Upon Fracture and
Toughness of [Medium Alloy] Steel, by M. P.
Bram.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,
Metal i Toplivo, No 2, 1960, pp 104-109.

HB 4854

Sci - Min/Met

Feb 61

145, 051

Alloys of Transition-Metal Borides With Other
Metals, by M. S. Koval'chenko.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,
Met Toplivo, No 2, 1960, pp 115-119. 9660415

HB 4853

Sci - Min/Met

ATK MEL 671

Oct 60

129,104

14 070

GF-1 * UK-23

ZAITSEVA S. P., et al.

Use of radioactive isotopes and nuclear radiations in investigating flotation processes

Die Anwendung von radioaktiven Isotopen und von Kernstrahlungen bei der Untersuchung des Flotationsprozesses

* Izv. Akad. Nauk SSSR, Otdel. Tekhn. Nauk, Metallurg. i Topl., No. 2, 130-132 (1960)

GF-1: German

* UK-23: English

E u r a t o m

Portnoi, K. I., Levinskii, Yu. V., and Fadeeva, V. I.
INTERACTION OF CERTAIN REFRACTORY CAR-
BIDES AND THEIR SOLID SOLUTIONS WITH CARBON.
[1962] 6p, 8 refs.
Order from OTS or SLA \$1.10

63-10845

Trans. of Akademiya Nauk SSSR. Otdelenie Tekhni-
cheskikh Nauk. [Izvestiya Metallurgiya i Toplivo,
1961, no. 2, p. 147-149].
Another trans. is available from OTS or SLA \$1.10
as AEC-tr-4871 [1961] 5p.

DESCRIPTORS: *Carbides, Titanium compounds,
Zirconium compounds, Tantalum compounds, Hafnium
compounds, Eutectics, *Refractory materials,
Chemical reactions.

For abstract see Technical Translations 8: 661, 1962

(Materials--Refractories, TT, v. 9, no. 12)

63-10845

I. Portnoi, K. I.
II. Levinskii, Yu. V.
III. Fadeeva, V. I.

Office of Technical Services

Kovalev, A. G.
SOME EMPIRICAL FACTORS OF THE DISPLACEMENT PROCESS FOR IMMISCIBLE LIQUIDS. [1960]

3p.

Order from ATS \$10.60

ATS-RPM43R

Trans. of Akademiya Nauk SSSR, Otdel[eniye]
Tekhnicheskikh Nauk, Izvestiya: Metallogiya i
Tsvetnaya Metallurgiya, 1960, no. 2, p. 146-150.

146,996

(Engineering, TT, v. 5, no. 5)

61-12308

- I. Petroleum--Separation
- I. Kovalev, A. G.
- II. ATS-80M43R
- III. Associated Technical Services, Inc.,
East Orange, N. J.

Office of Technical Services

18

(NY-4426)

Scientific Conference on the Metallurgy, Chemistry,
and Electrochemistry of Titanium, by S. V. Ogurtsov,
2 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk -
Metal i Topliva, No 2, 1960, pp 167, 168.

JPRS 5035

Sci - Metal

Aug 60

Tension Superficielle du Beryllium Liquide, (Surface
Tension of Liquid Beryllium), by V. N. Eremenko,
V. I. Nizhenko, Shou-wei T'ai, 4 pp.

RUSSIAN to FRENCH, per, Iz Ak Nauk SSSR, Otdel Tekh
Nauk, Met i Toplivo, No 3, 1960, p 116.

Reverse Trans
CEA Tr-R-1158

Sci
Jun 61

Structure Diagram and Some Properties of
Alloys of the System Niobium-Molybdenum-
Vanadium, 17 pp.

RUSSIAN, per Iz Ak Nauk SSSR, Otdel Tekh
Nauk, Metal. Toplivo, No 4, 1960, pp 143-149.
9571493

FTD MCL-1170/1

Sci. - Min/Metal

173,802

15 Nov 61

Glazov, V. M. and Liu, Chen-yuan.
 INVESTIGATION OF THE SEPARATE AND JOINT
 SOLUBILITY OF ALUMINUM AND ANTIMONY IN
 SILICON. [1951] 8p. 10 refs.

Order from MDF \$5.00

MDF G-194

Trans. of Akademiya Nauk SSSR. Otdeleniye
 Tekhnicheskikh Nauk. Izvestiya Metallurgiya
 Topolivo 1960, no. 4, p. 150-155.

(Physics--Solid State, IT, v. 5, no. 10)

61-12956

1. Semiconductors--Impurities
2. Silicon--Impurities
3. Aluminum--Solubility
4. Antimony--Solubility

- I. Glazov, V. M.
- II. Liu, Chen-yuan
- III. MDF G-194
- IV. Friedman, Morris D., Inc.,
 West Newton, Mass.

108936

Office of Technical Services

On the Broadening of the Possibilities of Using
Penetrating Radiation to Enrich Coal, by
V. D. Goroshko, O. M. Todes, A. Z. Yurovskiy,
5 pp.

RUSSIAN, per, Iz Ak Nauk USSR, Otdel Tekh
Nauk, Met i Toplov, No 4, 1960, pp 185-186.

MDF G-189
9092771

Sci
Oct 61

INVESTIGATION OF THE RECRYSTALLIZATION ON NICKEL-BASE,
CAST, HEAT RESISTANT ALLOY, BY Z. S. BYCHKOVA,
YU. V. VINOGRADOV, ET AL, 19 PP.

RUSSIAN, PER, IZ AK NAUK SSR, OTDEL TEKH NAUK,
METAL I TOPLIVO, NO 5, 1960, PP 70-78. 9678198

FTD-TT-62-518

SCI - MINERALS/METALS
11 OCT 62

212,358

INVESTIGATION OF PLASTIC DEFORMATION OF HIGH-MELTING
METALS AT HIGH TEMPERATURE, BY L. I. IVANOV,
M. P. MATVEYEVA, ET AL, 14 PP.

RUSSIAN, PER, IZ AK NAUK SSR, OTDEL TEKH NAUK,
METAL I TOPLIVO, NO 5, L960, PP 79-85. 9678198

FTD-TT-62-518

SCI - MINERALS/METALS
11 OCT 62

212,359

Kornilov, L. I., Ozhinkova, O. V., and
Pryakhina, L. I.
CORRELATION BETWEEN COMPOSITION, TEMPER-
ATURE, AND HEAT RESISTANCE OF NICKEL-
CHROMIUM-TUNGSTEN-TITANIUM-ALUMINUM AL-
LOYS. 6 May 61, 2p. AID rept. 61-25; AD-254 394.
Order from OTS or CIA \$1.10 61-19627

Abstract trans. of Academiya Nauk SSSR, Otdeleniye
Tekhnicheskikh Nauk, Zvestiya Metallurgiya i Top-
livo, 1960, no. 5, p. 137-141.

DESCRIPTORS: *Nickel alloys, *Chromium alloys,
*Tungsten alloys, *Titanium alloys, *Aluminum alloys.
Heat resistant alloys

The alloy studied was of constant Cr, W, and Ti con-
tent (not specified) and varying aluminum and (in-
versely) nickel content (0 to 16%). The solubility of
aluminum in nickel base solid solution was found to de-
crease with decreasing temperature. At 1200°C solu-
bility was 5.5%; at 1100°C, 4.2%; at 1000°C, 3%; and
(Metallurgy, TT, v. 6, no. 4) (over)

61-19627

- I. Kornilov, L. I.
- II. Ozhinkova, O. V.
- III. Pryakhina, L. I.
- IV. AID-61-25
- V. Air Information Div.,
Washington, D. C.
- VI. AD-254 394

177680

Office of Technical Services

Simulation by Scale Models of the Deformation
Processes in the Heat Treatment of Metals, by
V.A. Lomakin.

ISSUED BY: IN: Ak Nauk. SSSR, CTN, Met. 1. 100.
1. 100-100.

CIA/FDD XX-1018
UNITB ONLY

Viscosity and Electrical Conductivity of
Aluminum-Antimony, and Indium-Antimony
Alloys in the Liquid State, by V. M. Glazov,
8 pp.

RUSSIAN, part, Iz Ak Nauk USSR, ~~Engl~~ Otdel Tekh
Nauk, Met. i Toplov, No 5, 1960, pp 190-194.

MDF G-191
9092757

171, 533

62-24580

Glazov, V. M.
VISCOSITE ET CONDUCTIBILITE ELECTRIQUE DES
ALLIAGES Al-Sb, Ga-Sb ET In-Sb A L'ETAT LIQUIDE
(Vyazkost i Elektroprovodnost' Splavov Alyumini-
Sur'ma, Gallii -Sur'ma i Indii-Sur'ma v Zhldkom
Sostoyanii) tr. by Baftaloviky. 26 Dec 61 [14]p. (Russian
text included) 18 refs. CEA Trans. no. R 1464 (text in
French).

Order from OTS or SLA \$1.60

62-24580

Trans. in French of Akademiya Nauk SSSR. [Otdelenie
Tekhnicheskikh Nauk]. Izv[estiya Metallurgiya i
Toplivo] 1960, no. 5, p. 190-194.

DESCRIPTORS: *Viscosity, *Electrical conductance,
*Alkali metal alloys, Aluminum alloys, Antimony alloys,
Gallium alloys, Indium alloys, Liquid metals.

(Metallurgy, TT, v. 8, no. 3)

- I. Glazov, V. M.
- II. CEA-tr-R1464
- III. Commissariat à l'Énergie
Atomique (France)

Office of Technical Services

Churaev, P. V.

OBTENTION DES MICROPHOTOGRAPHIES ÉLEC-
TRONIQUES D'UNE PARCELLE DONNÉE DE LA
SECTION POLIE D'UN ÉCHANTILLON EXAMINÉ
(Poluchenie Elektronnykh Mikrofotografii s Zadannogo
Uchastka Shlifa Issleduemogo Obratzsa) [Obtaining
Electron Photomicrographs of a Given Area on Polished
Specimens Being Studied] tr. by B. Detrezvinsky.
9 Nov 61 [12]p. (foreign text included) 7 refs. CEA
Trans. no. R 1392.

Order from OTS or SLA \$1.60

62-13803

Trans. in French of Akademiya Nauk SSSR,
Ordelenie Tekhnicheskikh Nauk, [Zvestiya: Metal-
lurgiya i Toplivo] 1960, no. 5, p. 221-223.

DESCRIPTORS: *Electron microscopy,
Photomicrography.

Physics--Optics, TT, (10, no. 8)

62-13803

- I. Churaev, P. V.
- II. CEA-tr-R-1392
- III. Commissariat à l'Énergie
Atomique (France)

Office of Technical Services

Metallo-Ceramic Method of Obtained Alloyed
Holdings on the Basis of Molybdenum, by
A. V. Savin, 7 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, VTN,
Metallurgiya i Toplivo, No 6, 1960,
pp 47-50. 9670988

FTD MCL-952/1

Sci - Min/Met

169,301

Sep 61

Refining Metallic Lithium, by T. F. Fedorov,
P. I. Shampay, 10 pp.

RUSSIAN, pr, Iz Ak Nauk SSSR, OTN, Metal i
Toplivo, No 6, 1960, pp 56-64. 9670744

FTD MCL-953/1

Sci - Min/Metal

1 Sept 61

Sept 1961
TN 7 ES 7 No 6

165,896

Belashchenko, D. K.

PROPRIETES CINETIQUES DES ALLIAGES DE
METAUX LIQUIDES (Kineticheskie Svoystva Zhidkikh
Metallicheskikh Splavov) [Kinetic Properties of
Liquid Metal Alloys] Mme Bouteroff, tr. 24 Mar 62
[19p] (Russian text included) 14 refs

CEA Trans. no. R 1557.

Order from OTS, SLA, or ETC \$1.60 TT-63-24271

Trans. in French of Akad[emiya] Nauk SSSR.

[Otdelene Tekhnicheskikh Nauk]. Izvestiya:
Metallurgiya i Toplivo 1960, no. 6, p. 89-93.

DESCRIPTORS: *Alloys, *Liquid metals, Dynamics,
Viscosity, Electrical conductance, Resistance
(Electrical), Magnetic properties.

(Metallurgy, TT, v. 11, no. 5)

TT-63-24271

- I. Belashchenko, D. K.
- II. CEA-tr-R1557
- III. Commissariat à
l'Énergie Atomique,
Paris (France)

Office of Technical Services

Shmuk, E. I.
THERMODYNAMICS OF COAL PYRITE OXIDATION.
[1961] 10p. (2 figs. omitted) 17 refs.
Order from OTS or SLA \$1.10

62-10208

Trans. of [Akademiya Nauk SSSR. Otdelenie Tekhnicheskikh Nauk. Izvestiya]: Metallurgiya i Toplivo, 1960, no. 6, p. 177-182.

DESCRIPTORS: *Coal, *Pyrites, Oxidation, Thermodynamics, Thermochemistry.

On the basis of thermodynamic calculations, equilibrium constants and free energies were obtained for the pyrite oxidation reaction in relation to changes in temperature. The heat effects of pyrite oxidation were calculated. It was established that an increase in pressure favors pyrite oxidation by oxygen of the air. (Author)
(Chemistry--Physical, TT, v. 7, no. 9)

62-10208

I. Shmuk, E. I.

Office of Technical Services

Teumin, I. I.
METHODIK UND BESONDERE VERHÄLTNISSE BEIM
ANLEGEN ELASTISCHER SCHWINGUNGEN AN
METALLEGIEßUNGEN (Methodology and Special Con-
ditions on Applying Elastic Vibrations to Metal Alloys).

11p.

Order from ITB \$2.00

Trans. in German of Akademiya Nauk SSSR. Otdelenie
Tekhnicheskikh Nauk. Izvestiya Metallurgiya i Toplivo,
1961, no. 1, p. 24-30.

DESCRIPTORS: *Vibration mechanisms, Elasticity,
*Metals, *Alloys

(Metallurgy, TT, v. 9, no. 11)

62-27298

I. Teumin, I. L
II. Technische Informations-
bibliothek, Hannover
(West Germany)

HB 6371

Office of Technical Services

COALESCENCE, SPHEROIDIZATION, AND HEALING OF MICROPORES
AND MICROCRACKS IN IRON ALLOYS, BY E. N. POGREBNOY,
11 PP.

RUSSIAN, PER, IZ AK NAUK SSSR, OTDEL TEKH NAUK,
METAL I TOPLIVO, NO 1, 1961, PP 58-63. 9678199

FTD-TT-62-519

SCI - MINERALS/METALS
11 OCT 62

212,361

INFLUENCE OF ALLOYING ELEMENTS ON THE PROPERTIES OF
STEEL, BY M. P. BRAUM, 19 PP.

RUSSIAN, PER, IZ AK NAUK SSSR, OTDEL TEKH NAUK,
METAL I TOPLIVO, NO L, 1960, PP 64-73. 9678199

FTD-TT-62-519

SCI -MINERALS/METALS

11 OCT 62

212,362

LOCAL PLASTIC DEFORMATION DURING BRITTLE DESTRUCTION
OF COMMERCIAL IRON, BY B. S. KASATKIN, 19 PP.

RUSSIAN, PER, IZ. AK. NAUK SSSR, OTDEL TEKH. NAUK,
METAL I TOPLIVO, NO 1, 1969, PP 108-116. 9678199

FTD-TT-62-519

SCI - MINERALS/METAL
11 OCT 62

212,363

Bu. of Mines CP-443-67

R-7940-D

2 Feb 67

Properties and phase composition of alloys of boron
with carbon

By: Zhuravlev, N. N.

From: Izvestia, Otdeleniye tekhnicheskikh nauk,
Metallurgiya i toplivo, 1961 No 1, 133-141 (9 pp)

Russian - est for wds:

Please translate and type 1 ~~separately~~ copy.
Document can be cut. original

Some Peculiarities of the Reduction of Hardened
Pellets From Southern Concentrates by Gases, by G. V.
Gubin, et al.

RUSSIAN, per. Iz Ak Nauk SSSR, Otdel Tekh Nauk,
Metal i Toplivo, No 1, 1961, pp 147-149.

HB 51.81
\$2.85

Sci

Aug 61

163,168

The Use of Radioactive Radiation for Controlling
the Ash Content of Coal, by V. D. Goroshko,
B. P. Nikonorova.

RUSSIAN, per, Iz Ak Nauk SSSR Otd Tekh Nauk
Metal i Toplivo, No 1, 1961, pp 152-157

WIL M 8850

Sci - Phys
Mar 63

~~224,282~~
224,282

(SF-1818)

Nikolay Mikhaylovich Karavayev, 5 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk --
Metal : Toplivo, No 1, 1961, pp 181-184.

JPRS 4723

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Jul 61

160,484

Natural Gas in the Reduction Reactions of Iron Ores
in a Fluidized Bed, by K. P. Lavrovskiy, A. L.
Rozenental', A. Kh. Eglit.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk,
Metal i Toplivo, No 2, 1961, pp 13-19.

HB 5179

Sci -

Aug 61

163,166

Reduction of Lead Losses in Slags by Electro-
Chemical Methods, by A. N. Kvyatkovskiy, et al.

RUSSIAN, per, Iz Ak Nauk SSSR Otdel Tekh Nauk
Metall. Toplivo, Vol II, 1961, pp 43-48.x

NLL RTS 2148

Sci - M/16, Electron
May 63

230,643

Kinetics of Reduction by Carbon Monoxide of Free
Lead Oxide and Lead Oxide Combined in Silicates,
by I. G. Berezkina, et al.

RUSSIAN, per, Iz Ak Nauk SSSR, (Adel Tekh Nauk
Metal i Toplivo, Vol II, 1961, pp 49-54.

NIL RTS 12149

Sci - Phys, Chem
May 63

230,644

Heat Content of Slags in the System Iron-Oxide
Zinc-Oxide Silica, by Z. F. Gulyamitskaya.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk
Metal i Toplivo, Ser I Vol II, 1961, pp 55-59.

RLZ RM9 E150

Sol - Phys
May 63

230,645

Initial Stages in the Plastic Deformation of Iron ,
by V. H. Kochnov, I. I. Zlochevskaya.

RUSSIAN, paper, Iz Ak Nauk BSSR, (Izdel Tekh Nauk
Metal i Toplivo, Vol. II, 1961, pp 60-63.

MLL RTS 21521

Sci - M/M
May 63

230,646

Investigation of the Hot Rolling of Aluminium in
Vacuum and in Air, by I. M. Pavlov, et al.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk
Metal i Toplivo, Vol II, 1961, pp 64-67.

NIL RTS 2152

Sci - M/M
May 63

230,647

The Effect of Small Degrees of Plastic Strain
on Properties of D16 Aluminum Alloy With Different
Grain Sizes, by E. I. Shilova, O. G. Niktaeva.

RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk
Metal i Toplivo, Vol II, 1961, pp 66a-71.

MLL RTB 2153

Sol - M/M
May 63

230,648

Interaction of Impurities During the Zone Re-
crystallization of Antimony, by V. N. Vigdorovich.

RUSSIAN, per, Iz Ak Nauk SSSR, Usdal Tekh Nauk
Metal i Toplivo, Vol II, 1961, pp 72-76.

NIL RES 2154

Sci - M/M
May 63

230,649

Basic Stages and Metallurgical Features of the Arc
Welding Process, by A. A. Erokhin.

RUSSIAN, per, Iz Ak Nauk SSSR, (Mdal Tekh Nauk
Metal i Toplivo, No Vol II, 1961, pp 77-82.

NIL RTS 2155

Sci - N/M
May 63

230,650

Properties of Liquid Alloys in Systems With
Unlimited Solidus Solubility, by A. A. Vertman,
A. M. Sumarin.

RUSSIAN, per, Iz Ak Nauk SSSR Otdel Nauk
Metal i Toplivo, Vol II, 1961, pp 83-87.

NIL RTS 2156

Sci - M/IE
May 63

230,651

On the Kinetic Characteristics of Liquation
Micro-Inhomogeneities in the Crystallization
of Solid Solutions, by V. M. Glazov,
Liu Chen-yuan, 13 pp.

RUSSIAN, per, Iz Ak Nauk USSR, Otdel Tekh Nauk,
Met 1 Toplov, No 2, 1961, pp 99-107.

MDF G-206
9092759

171, 532

Sci
Oct 61

High Speed Nitriding by Induction Heating, 2 pp.

RUSSIAN, per, Iz Ak Nauk SSSR, OTN, Metallurgiya,
No 2, 1961, pp 132-140.

CIA/FDD XX-1040

NOT RELEASABLE TO FOREIGN NATIONALS

Sci - Chem

Sep 61

USIB INTERNAL USE ONLY

Character of the Reaction of Certain Refractory
Metals and Their Solid Solutions With Carbon,
M. S. E. Potasy, Yu. V. Levinshly, V. I. Podayova,
1961

Abstract, per. Iz Ak Nauk SSSR, Otdel Tekh. Nauk,
Zhurnal i Topiko, No 2, 1961, pp 147-149. 903552

AIC Tr-4871

Sci - Chem

Mar 62

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(10-61/8)

General Meeting of the ~~USSR~~ Department of
Technical Sciences of the Academy of Sciences
USSR. M. G. Y.

RUSSIAN, per, Iz. Ak. Nauk, SSSR Otdel Tekh
Nauk. Material 1 Toplivo, No 2, 1961. pp 102-104.

JPRS 8890

Sci. Misc
Oct 61

171. 889

Hypothesis on Universal Ejection Properties of Turbulent
Jets of Gas, and Its Application, by O. V. Yakovlevskiy,
32 pp.
RUSSIAN, per, Iz Ak Nauk SSSR, Otdel Tekh Nauk Metal
i Toplivo, No 3, 1961, pp 40-54. 9691144

DEC RSIC-108

Sci - Fuels & Prop
Feb 64

250,737

THE EFFECT OF SMALL ADDITIONS OF NICKEL AND COBALT
ON THE SINTERING OF IRON POWDER, BY R. A.
ANDRYEVSKIY, I. M. FEDORCHENKO.

RUSSIAN, PER, IZ AK NAUK SSSR, OTDEL TEKH NAUK,
METALLURG I TOPLIV, NO 3, 1961, PP 50-54.

NLL M. 3770

SCI - MIN/METALS

OCT 62

214,742

Voloshin, V. A., Vyotskaya, A. I., Gansenko, V. E.,
and Urazovskii, S. S.

THE THERMODYNAMICS OF COKING [Zur Thermodynamik des Verkohlungsprozesses]. [1963] [11p] Sreft
C. E. Trans. 2997.

Order from OTS, SLA, or ETC \$1.60 TT-63-23912

Trans. of Akad[emiya] Nauk SSSR. [Otdelenie Tekhnicheskikh Nauk]. [Izvestiya] Metallurgiya i Toplivo, 1961, no. 3, p. 188-190.

Another trans. is available in German from TEB \$2.35.

DESCRIPTORS: *Thermodynamics, *Coke, Coal, Heat of formation, Entropy, Calorimeters, Pyrolysis.

This study determined the heats of formation of the solid products in the thermal decomposition of C₂ gas coal and its vitrain. Entropy determinations were made from measurements of the heat capacity at low temperatures. (Author)

TT-63-23982

- I. Voloshin, V. A.
- II. Vyotskaya, A. I.
- III. Gansenko, V. E.
- IV. Urazovskii, S. S.
- V. CE Trans-2997
- VI. Central Electricity
Generating Board
(Gt. Brit.)

LOAN 1-1
1961-1962 (1963-1964)

(Materials--Fuels, TT,
v. 11, no. 6)
Office of Technical Services

Investigation of the Effect of a Liquid SHOCK
Phase on the Movement of the Gas Stream in a
Cold Model of a Blast Furnace, by Wang Te-Jung,
L. M. Baylev.

RUSSIAN, per, Izvest Ak Nauk SSSR, OTN, Vol 1
Toplivo, No 4, 1961, pp 12-17.

HB 6034

Sol-M/M
Jan. 64

246,358